

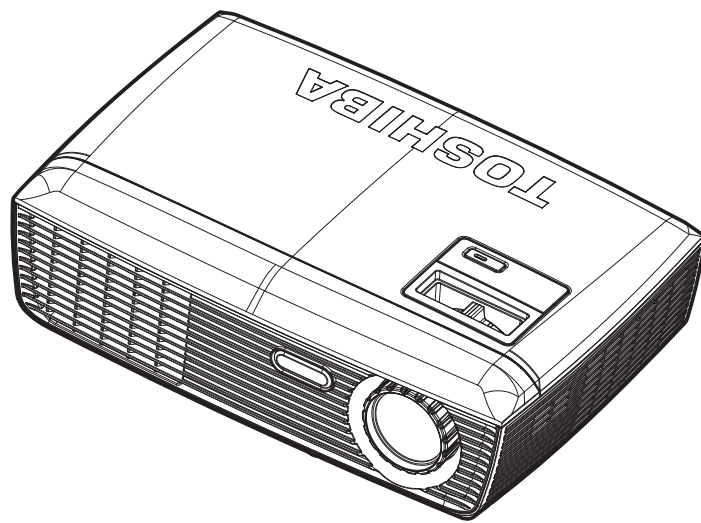
TOSHIBA

Leading Innovation >>>

NPS10A/NPX10A

DATA PROJECTOR

USER'S MANUAL



In the spaces provided below, record the Model and Serial No. located at the bottom of your projector.

Model No. _____ Serial No. _____

Retain this information for future reference.

Before Using

Preparations

Operations

Maintenance

Others

SAFETY INFORMATION



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

IMPORTANT SAFETY INSTRUCTIONS

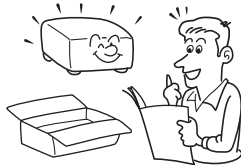
CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS GIVEN IN THIS USER'S MANUAL AND THOSE MARKED ON THE UNIT. RETAIN THIS BOOKLET FOR FUTURE REFERENCE.

This unit is fully transistorized and does not contain any parts that can be repaired by the user.

WARNING: DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

1. Read User's Manual

After unpacking this product, read the user's manual carefully, and follow all of the operating and other instructions.



2. Power Sources

This product should be operated only from the type of power source which does not exceed the voltage range specified on the rating label and the power cord. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

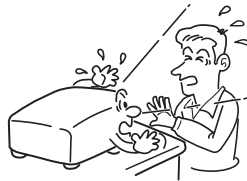


IMPORTANT SAFETY INSTRUCTIONS (Continued)

Before Using

3. Source of Light

Do not look into the lens while the lamp is on. The strong light from the lamp may cause damage to your eyesight.



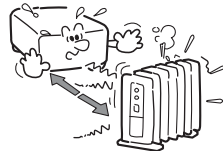
4. Ventilation

Openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and protect it from overheating. These openings must not be blocked or covered. Never block an opening by placing the product on a bed, sofa, rug or other similar surface. Do not place it in a built-in installation such as a bookcase or rack, unless proper ventilation is provided.



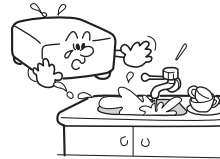
5. Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.



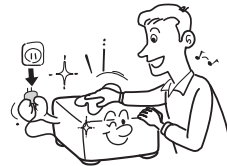
6. Water and Moisture

Do not use this product near water. - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool and the like.



7. Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Always use a soft cloth for cleaning.



8. Be sure that you firmly insert the plug into the wall outlet.

Incorrect or faulty connections may result in fire or electric shock. Avoid using an unsound or loose outlet.

IMPORTANT SAFETY INSTRUCTIONS (Continued)

9. Power Cord Protection

Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.



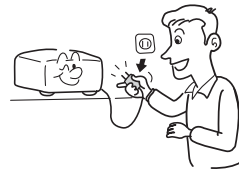
10. Overloading

Do not overload wall outlets. To reduce the risk of electric shock, do not use the polarized plug with an extension cord, receptacle, or other outlet unless the blades can be inserted completely with three-wire grounding type to prevent blade exposure. Failure to follow these instructions may result in fire or electric shock.



11. Lightning storms

For added protection for this product during a storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges. Never operate this unit on AC power during a thunderstorm. If you see lightning or hear thunder, never touch the unit, cables and/or peripherals. An electric surge caused by the storm, may result in an electrical shock or damage to the unit.



12. Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.



13. Do not place or keep the projector within the reach of the children.

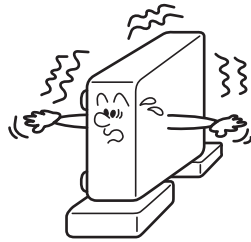
It may fall or tip over, possibly causing serious injury.

IMPORTANT SAFETY INSTRUCTIONS (Continued)

Before Using

14. Do not place the product vertically

Do not use the product in the upright position or any other vertical positions to project the pictures. It may fall which could result in serious injury and/or damage to the product.



15. Stack Inhibited

Do not stack other equipment on this product and do not place this product on other equipment. The top and bottom surface of this product increase in temperature during normal use and may damage the other unit.



16. Attachments

Do not use attachments not recommended by the product manufacturer. Use of an incompatible attachments could cause hazards or damage to the product.

17. Accessories

Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



18. Damage Requiring Service

Unplug this product from the wall outlet and take the product to qualified service personnel if you encounter any of the following conditions:

- The power supply cord or plug is damaged.
- Liquid has been spilled, or objects have fallen into the product.
- The product has been exposed to rain or water.
- The product does not operate normally when following the operating instructions. Adjust only those controls that are covered by the operating instructions since an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.

IMPORTANT SAFETY INSTRUCTIONS (Continued)

- e) The product has been dropped or damaged in any way (If the cabinet should break, please handle with care to avoid injury).
- f) The product exhibits a distinct change in performance, which indicates a need for service.

19. If glass components, including lens and lamp, should break, contact your dealer for repair service.

This product incorporates glass components, including a lens and a lamp. If these should break, please handle with care to avoid injury and contact your dealer for repair service. Avoid any broken pieces of glass since they may cause injury. In the unlikely event that the lamp ruptures, thoroughly clean the area around the projector and discard any edible items placed in that area since they may be contaminated.

20. Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.



21. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part.

Unauthorized substitutions may result in fire, electric shock, or other hazards.

22. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to verify that the product is in proper operating condition.



23. Do not leave thermal-paper documents or easily deformed items on top of the unit or near the air exhaust for long periods of time.

The heat from the unit could erase the information on the thermal paper, or cause deformation or warping.

24. Do not use the product in a closed installation location.

Do not place the product in a box or in any other closed installation location. Otherwise it may overheat, which could result in a risk of fire.

IMPORTANT PRECAUTIONS

Moisture Condensation

Never operate this unit immediately after moving it from a cold location to a warm location. When the unit is exposed to such a change in temperature, moisture may condense on the lens and the crucial internal parts. Do not use the unit for at least 2 hours when there is an extreme or sudden change in temperature to prevent the unit from possible damage.

Place and Manner of Installation

- Do not place in hot locations, such as near heating equipment. Doing so could cause malfunction, and shorten the life of the projector.
- Avoid locations with oil or cigarette smoke. Doing so will dirty the optical parts, shortening their lives, and darkening the screen.
- Do not use this product in the upright position or tilt it up or down by more than 20° from level. Doing so may cause a failure or shorten the life of the product.
- Using this instrument near a TV or radio may cause interference to the images or audio sound. If this happens, move it away from the TV or radio.
- Moving the projector from a low-temperature room to a high-temperature room may cause condensation on the lens or internal parts. If you continue to use it in that situation it may malfunction. Wait until the condensation naturally disappears.
- In a high altitude location where air is thin, cooling efficiency is reduced so use the projector with **[High Altitude]** set to **[On]**. [p.34](#)
- The set of projector is hot after use. Handle with care.
- Do not use the projector while holding it in your hands or lap.
- Do not use the projector near a power source and the like, or in locations like a ship or vehicle that are subject to vibration or shock. Doing so may lead to a malfunction or shorten service life.
- Only plug the power cord into outlets rated for use with the power cord's specified voltage range. Do not overload extension cords or power strips as this can result in fire or electric shock.
- Route the power cable or the connecting cable away from where people could trip over it. The projector may fall, which could result in severe injury.
- Be sure the power cord is easily reached for unplugging in case of emergency. Do not place any obstacles near a wall outlet in which the cord is plugged.

Avoid Volatile Liquid

Do not use volatile liquids, such as an insect spray, near the unit. Do not leave rubber or plastic products touching the unit for a long time, as they will leave marks on the finish. Do not use a chemically saturated cloth.

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- Toshiba Corporation accepts no liability whatsoever for any damages arising from malfunctions arising from combination with equipment or software that is not related to Toshiba Corporation.

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OTHER INFORMATION (Continued)

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Notational Conventions Used in This Manual

- References to pages with related information are annotated as follows. For example, if making a reference to page 32: [p.32](#)
- The illustrations in this document are for reference purposes only and may not reflect your package exactly.

REMOTE CONTROL BATTERY

Warning

- Never throw a battery into a fire.
- Using the battery improperly may cause them to explode or leak and may result in serious injury. If battery-leaking fluid contacts skin, wash the fluid off immediately with clean water and consult a doctor. If the fluid spills on an instrument, avoid contact and wipe it off using tissue paper. Then dispose of the used tissue paper as flammable garbage after moistening it with water.
- Keep the battery away from the reach of children. Battery is choking hazard and can be very dangerous if swallowed. If the battery is swallowed, seek medical assistance immediately.

Notes

- Be sure to use a CR2025 battery.
- Dispose of a battery in a designated disposal area.
- Check and follow your local regulations before disposal.
- Attention should be drawn to the environmental aspects of battery disposal.
- If the remote control does not operate correctly, or if the operating range becomes reduced, replace the battery with a new one.
- If the battery is dead or if you will not be using the remote control for a long time, remove the battery to prevent battery acid from leaking into the battery compartment.

CONTENTS

Before Using

SAFETY INFORMATION.....	2
IMPORTANT SAFETY INSTRUCTIONS.....	2
IMPORTANT PRECAUTIONS.....	7
EXEMPTION CLAUSES.....	8
OTHER INFORMATION.....	8
REMOTE CONTROL BATTERY.....	9
CONTENTS.....	10

Preparations

Checking the package contents.....	12
Names of each part on the main unit.....	13
Names of each part on the control panel.....	14
Names of each part on the remote control.....	15
Parts on the rear panel.....	17
Preparing and using the remote control.....	18
Placement.....	19
Connection.....	21

Operations

Turning the power on and off.....	22
Basic operations.....	24
Using the handy features.....	26
Using auto setting (For computer input only).....	26
Correcting the keystone distortion.....	26
Cutting off the picture and sound temporarily (Mute).....	27
Freezing the image (Freeze).....	27
Changing picture mode.....	27
Resizing image.....	28
Using the menus.....	29
How to use the menus.....	29
The image adjustment menu.....	30
The screen setting menu.....	32
The default setting menu.....	33
The options setting menu.....	34

Maintenance

About lamp.....	35
Lamp replacement.....	36
Lens and main unit cleaning.....	38

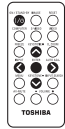
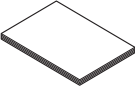

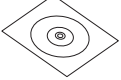
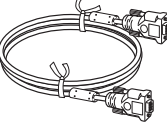

CONTENTS (Continued)

Others

Trouble indicators	39
Before calling service personnel.....	40
Specifications.....	41
List of general specifications	41
List of supported signals (RGB signals)	42
List of supported signals (HDMI)	43
List of supported signals (Video)	44
Pin assignment of COMPUTER IN terminal.....	45
SERIAL terminal.....	45

Checking the package contents

Please make sure that the following items are included in the box, along with the main unit. If any item is missing, immediately contact the store where you purchased the product.

- | | | | | | |
|-----|---|-----|---|-----|--|
| (1) |  | (3) |  | (5) |  |
| (2) |  | (4) |  | (6) |  |
- (1) Remote control
- (2) CD-ROM (User's Manual)
- (3) Quick Start Guide
- (4) RGB cable (See note below)
- (5) Power cord (See note below)
- (6) Bag

Notes

- The shape and number of supplied power cords vary depending on the product destination.
- To maintain original performance, always use the supplied cables.

Save Original Packing Materials

The original shipping carton and packing materials will come in handy if you ever have to ship your projector. For maximum protection when shipping your projector, repack the set as it was originally packed at the factory.

◆ The Supplied CD-ROM

The supplied CD-ROM contains the user's manual in Portable Document Format (PDF). Please use Acrobat Reader 5 or later version to view the manual.

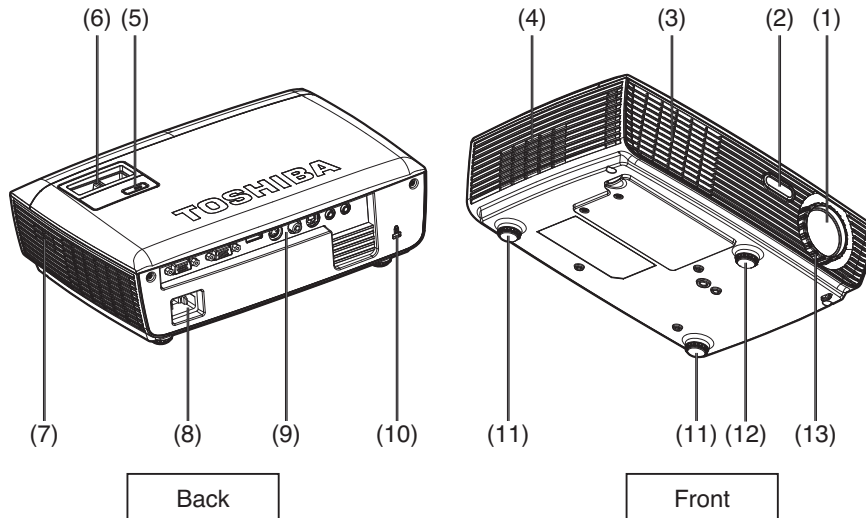
■ Adobe® Acrobat® Reader® or Adobe® Reader®

The supplied CD-ROM does not contain Acrobat® Reader®. If you cannot read PDF files, please install Adobe Reader software in your computer by downloading it from the Adobe Systems website.

■ Viewing the manual

Run the CD-ROM and double-click on **Start.pdf**. Acrobat® Reader® launches, and the menu screen of the user's manual appears. Click on your language. The User's Manual cover and list of bookmarks appear. Click on a bookmark title to view that section of the manual. See the Help menu for more information about Acrobat® Reader®.

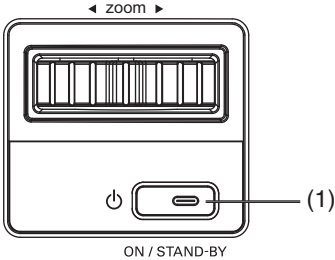
Names of each part on the main unit



Name : Function

- | | |
|----------------------------|---|
| (1) Lens | : Projects expanded image. |
| (2) Infrared remote sensor | : Senses commands from the remote control. p.18 |
| (3) Air exhaust | : Expels hot air out of the projector. |
| (4) Air intake | : Draws in air from outside the projector for internal cool down. |
| (5) Control panel | : Operates the projector. p.14 |
| (6) Zooming ring | : Adjusts screen size. p.25 |
| (7) Speaker | : Outputs audio sound. |
| (8) AC IN socket | : Connect the supplied power cord here. p.22 |
| (9) Rear panel | : Connects external devices. p.17 |
| (10) Antitheft lock slot | : Attach a safety cable or any other antitheft device. |
| (11) Tilt adjuster | : Adjusts the projector's horizontal tilt. p.25 |
| (12) Foot adjuster | : Adjusts the vertical projection angle. p.25 |
| (13) Focusing ring | : Adjusts screen focus. p.25 |

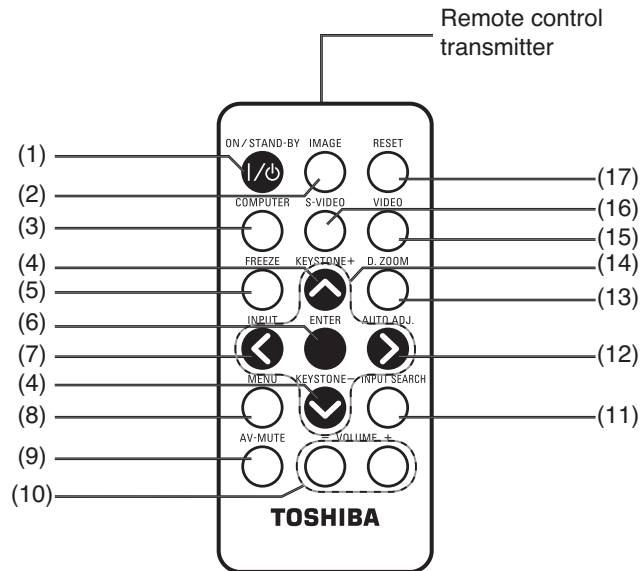
Names of each part on the control panel



Name : Main Function

-
- (1) ON/STANDBY button/ indicator : Turns the power on/off (standby). [p.22](#)
: Displays power on/off mode. [p.22](#)

Names of each part on the remote control

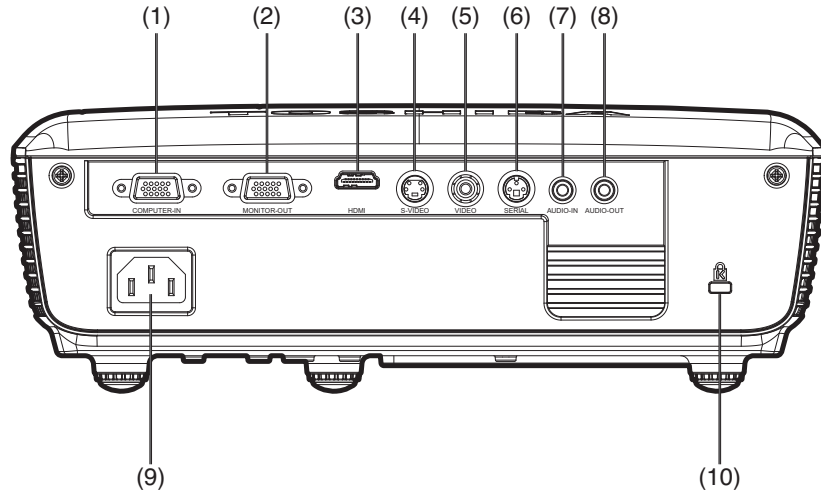


Name	: Main Function
(1) ON/STANDBY button	: Turns the power on/off (standby). p.22
(2) IMAGE button	: Changes picture mode. p.27
(3) COMPUTER button	: Selects COMPUTER input source.
(4) KEYSTONE +/- button	: Adjusts keystone distortion. p.26
(5) FREEZE button	: Pauses image. p.27
(6) ENTER button	: Accepts the selected mode.
(7) INPUT button	: Selects input source. p.24
(8) MENU button	: Displays menus. p.29
(9) AV-MUTE button	: Momentarily turns off/on the audio and video. p.27
(10) VOLUME +/- button	: Adjusts the volume.
(11) INPUT SEARCH button	: This function detects the input signal automatically. When finding a signal, the search will stop. p.24
(12) AUTO ADJ. button	: Performs auto-adjustment of input signals from computer. p.26

Names of each part on the remote control (Continued)

Name	: Main Function
(13) D. ZOOM button	: Zoom out or zooms in the projector display. p.28
(14) Selection buttons	: Menu selections and adjustments. p.29
(15) VIDEO button	: Selects VIDEO input source.
(16) S-VIDEO button	: Selects S-VIDEO input source.
(17) RESET button	: Resets all adjustments and settings to their factory settings.

Parts on the rear panel



Preparations

Name	Main Function
(1) COMPUTER IN terminal	: Input analog RGB signal from a computer or other source, or a component video signal (Y/Pb/Pr) from video equipment.
(2) MONITOR OUT terminal	: Connect to a computer display, etc.
(3) HDMI terminal	: Input HDMI (Digital Audio/Video) signal from video equipment.
(4) S-VIDEO terminal	: Input S video signals from video equipment.
(5) VIDEO terminal	: Input video signals from video equipment.
(6) SERIAL terminal	: Maintenance use only.
(7) AUDIO IN terminal	: Input audio signals.
(8) AUDIO OUT terminal	: Outputs audio signals.
(9) AC IN socket	: Connect the supplied power cord here.
(10) Antitheft lock slot	: Attach a safety cable or any other antitheft device.

Notes

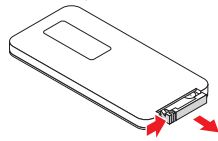
- HDMI terminal is NOT supported for NPS10A.

Preparing and using the remote control

■ Loading a coin cell battery into the remote control

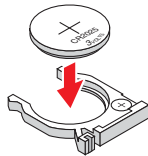
① Remove the battery holder.

Hold down the side release firmly and pull out the battery holder.

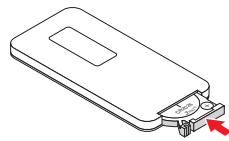


② Load a coin cell battery (CR2025).

Be sure to align the plus and minus ends of the battery properly.



③ Replace the battery holder back into the remote control.

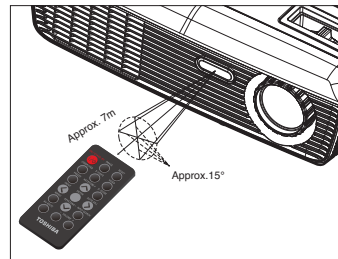


■ Notes

- When you use for the first time after purchase, a plastic sheet is provided between the battery and its contact. Be sure to remove by pulling it off.
- When operating the remote control from behind the projector, the infrared beam is reflected on the projecting surface and may travel a shorter distance to reach the projector depending on the shape and material of the projecting surface.

■ Operating the remote control

- Point toward the projector's infrared remote sensor, and press a button on the remote control.
- Operating the projector from the front



■ Coin cell battery

- Before using the battery, be sure to observe the Safety Precautions described in previous pages.
- Remove the battery from remote control when not using for extended periods.
- If the remote control stops working, or if its range decreases, replace the battery with a new one.
- Keep the battery away from the reach of children. Battery is choking hazard and can be very dangerous if swallowed. If the battery is swallowed, seek medical assistance immediately.

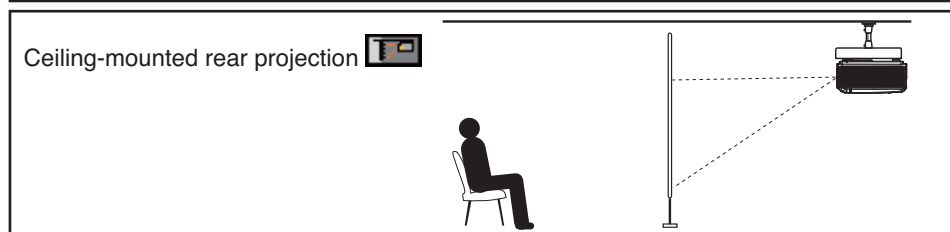
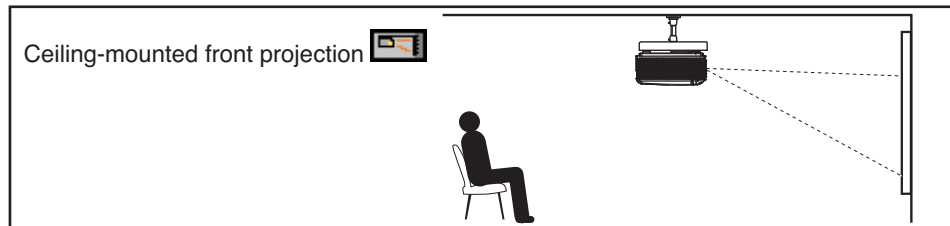
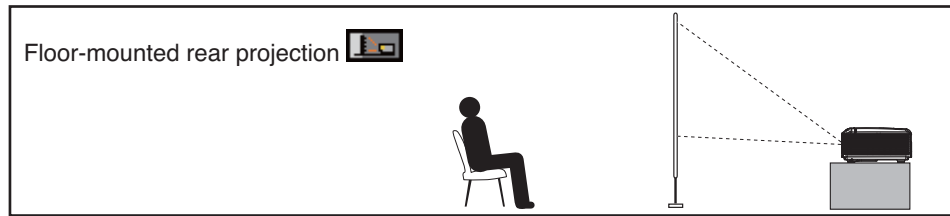
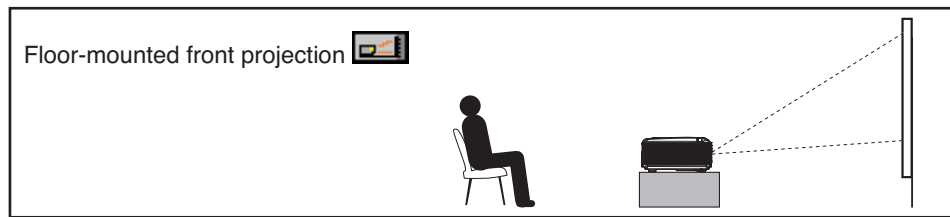
■ The remote control

- The remote control may fail to operate if the infrared remote sensor is exposed to bright sunlight or fluorescent lighting.
- Do not drop or bang.
- Do not leave in hot or humid locations.
- Do not allow it to get wet or place it on top of wet objects.
- Do not take apart.
- In rare cases, ambient conditions could impede the operation of the remote control. If this happens, point the remote control at the main unit again, and repeat the operation.

Placement

Placement Styles

As shown in the figures below, this device can be placed in 4 different styles. The factory setting is “floor-mounted front projection.” Set the **[Mounting]** in the **Default setting** menu. [p.33](#)



WARNING

- Always obey the instructions listed in **IMPORTANT SAFETY INSTRUCTIONS** when placing the unit. Attempting to clean or replace the lamp in a high location by yourself may cause you to fall, resulting in injury.
- If you wish to mount the projector on the ceiling, be sure to ask your dealer to do so. Mounting the projector on a ceiling requires special ceiling brackets (sold separately) and specialized knowledge. Improper mounting could cause the projector to fall, resulting in an accident.
- If the projector is ceiling-mounted, install the breaker for turning off the power in case of anomaly. Let everyone involved with the use of the projector know that fact.

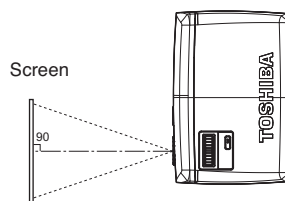
Maintenance

Placement (Continued)

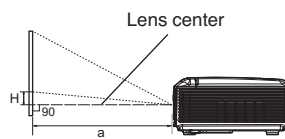
Projection Distance and Size

Use the figures, tables, and formulas below to determine the projection size and projection distance. (Projection sizes are approximate values for full-size picture with no keystone adjustment.)

As seen from above



As seen from the side



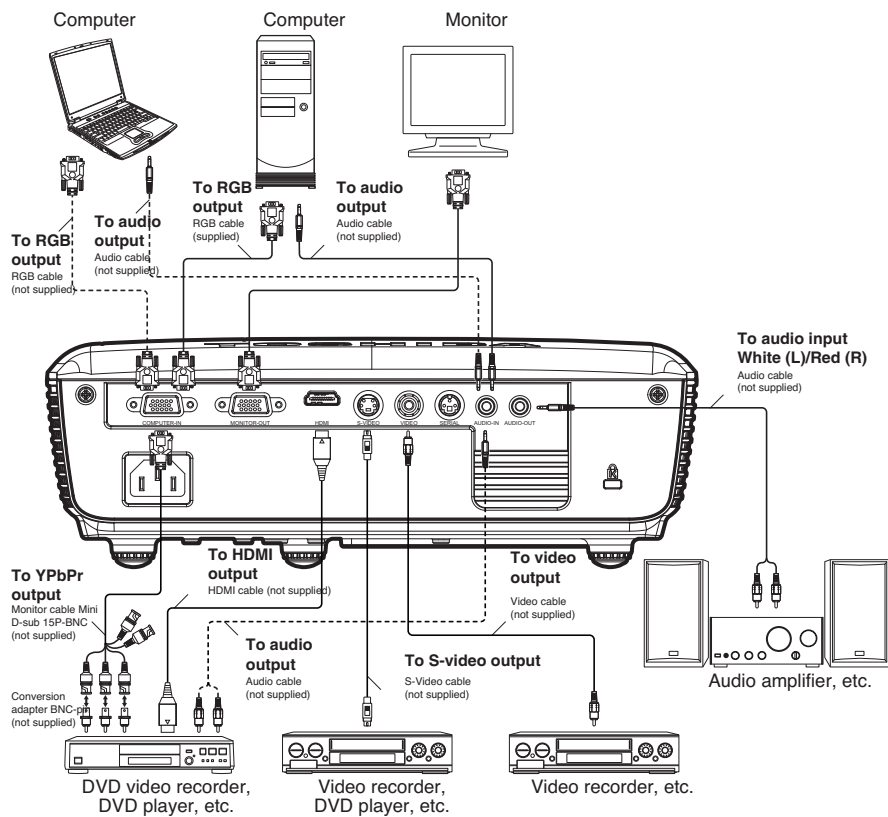
Projection size (inches)	Wide		Tele		Offset	
	distance (a)		distance (a)		height (H)	
	(m)	(feet)	(m)	(feet)	(cm)	(feet)
30	1.19	3.90	1.31	4.30	6.86	0.22
40	1.58	5.20	1.75	5.73	9.14	0.30
60	2.38	7.80	2.62	8.60	13.72	0.45
70	2.77	9.10	3.06	10.03	16.00	0.52
80	3.17	10.40	3.50	11.46	18.29	0.60
90	3.57	11.70	3.93	12.90	20.57	0.67
100	3.96	13.00	4.37	14.33	22.86	0.75
120	4.75	15.60	5.24	17.20	27.43	0.90
150	5.94	19.50	6.55	21.49	34.29	1.12
180	7.13	23.39	7.86	25.79	41.15	1.35
250	9.91	32.49	10.92	35.82	57.15	1.87
300	11.89	38.99	13.11	42.99	68.58	2.25

a is the distance (m, feet) between the lens and the screen, and corresponds to a range of 1.19 m to 11.89 m (3.90 ft. to 38.99 ft.). **H** is the height (cm, feet) from the image bottom to the center of the lens.

Connection

Before connection

- Read the user's manual of the device you are connecting to the projector.
- Some computers cannot be used with or connected to this projector.
- Check for an RGB output terminal, supported signal, etc.
- Turn off the power of both devices before connecting.
- The figure below shows sample connections. This does not mean that all of these devices can or must be connected simultaneously.



Notes

- Moving pictures played back on computers using DVD software may appear unnatural when projected with this projector. However, it is not a malfunction of the projector.
- When an AUDIO OUT terminal is connected, sound is not output from the projector speaker.
- Output volume of AUDIO OUT terminal can be adjusted by the VOLUME+/- button.
- The MONITOR OUT terminal outputs analog RGB signals or component video signals (Y/Pb/Pr) from the COMPUTER IN terminal.
- A computer monitor usually cannot accept Y/Pb/Pr signals correctly.

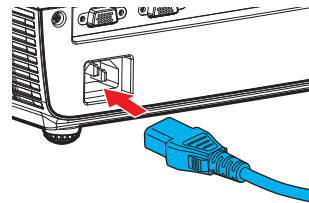
Maintenance

Turning the power on and off

■ Connecting the power cord

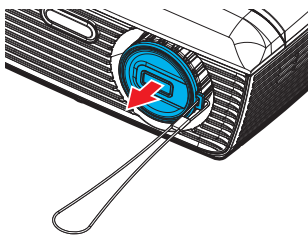
① Insert the power cord connector into the AC IN socket of the projector.

② Insert the power cord plug into a wall or other power outlet.



Power cord connector
(Supplied)

■ Removing the lens cover



Be sure to remove the lens cover when the power is turned on. If the cover is left on the projector, it could become deformed due to heat.

■ Turning the power on

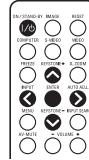
① Press the ON/STANDBY button.

The power is turned on, and the ON/STANDBY indicator lights blue. After a moment, the start-up screen appears.

Control panel



Remote Control



Start-up screen



⚠ CAUTION

- Do not look into the lens while the lamp is on. The strong light from the lamp may cause damage to your eyesight.
- Do not block the air intake or exhaust. Doing so could cause a fire due to internal overheating.
- Do not place your hands, face, or other objects near the air exhaust, the lamp cover or the bottom of the unit. Doing so could result in injury and/or damage the object.

■ Notes

- The start-up screen will disappear after a moment. You can also configure the system to prevent the start-up screen from appearing. To do this, use the **Default setting** menu. [p.33](#)
- The first time you use the projector after purchase, after the start-up screen disappears, the start menu is displayed. [p.24](#)
- Do not touch the lens directly with your hand. If fingerprints or stains are left on the projection lens surface, they may interfere with the projector's ability to project images on the screen.

Turning the power on and off (Continued)

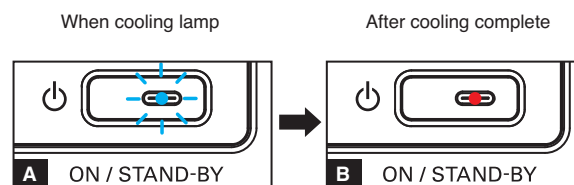
■ Turning the power off

① Press the ON/STANDBY button.

A message appears on the screen, confirming that you wish to shut off the power. To shut off the power, press the ON/STANDBY button again. If you do not wish to shut off the power, wait for a while without conducting any operations. The message will disappear shortly. (This operation is no longer valid after the message disappears.)

② Press the ON/STANDBY button again.

The screen turns off, but the internal cooling fan continues to operate for a short while. Then, the projector goes into standby mode.



A During cooling, the ON/STANDBY indicator flashes. In this state, the power cannot be turned back on. However, there is no problem with unplugging the power cord in this state.

B In standby mode

■ Notes

- The projector consumes about 0.5W of power in standby. We recommend that you unplug the power cord if you will not be using the projector for an extended period.

■ Precaution

- If the power cord is unplugged before cooling is complete, give the lamp time (about 5 minutes) to cool before plugging it back in. If the lamp overheats, it may fail to light.
- Right after turning off the power, the unit may become very hot, especially air exhaust and the bottom of the unit. Please handle with care to avoid burn injuries.

Basic operations

1 Turn the power.

Turn on the power by following the instructions in “Turning the power on”. [p.22](#)

2 Select the language (When using the first time).

The screen turns off, but the internal cooling fan continues to operate for a short while. Then, the projector goes into standby mode.

Use the ▲, ▼, ◀ or ▶ button to select the desired language and press the ⏪ button.

Message for setup confirmation is displayed in a selected language.



Notes

- When the projector is turned on the next time, the start menu does not appear upon startup.
- The language can also be set via the **Default setting** menu. [p.33](#)
- This user's manual assumes that English has been selected.

3 Activate the connected device.

Turn on and start the connected device such as a computer.

4 Press the INPUT button.

An image of the connected equipment is projected.

Each time you press the **INPUT** button, it switches to another source signal from the equipment which is connected to the projector.

Notes

- When [**Input search**] is set to [**On**] in the **Default setting** menu [p.33](#) (factory setting is [**On**]), the input is switched to the connected equipment that is outputting video signals each time you press the **INPUT** button. [p.42](#)
- Right after the input source is switched to the other, the color of the image may change slightly.

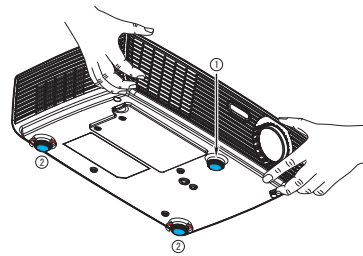
Basic operations (Continued)

5 Projector placement angle adjustments.

The placement angle and the height of the projected image can be adjusted by the foot adjuster.

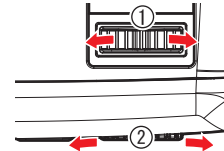
- 1 Lift up the front of the projector to the desired angle, then use the foot adjuster.
- 2 To adjust the horizontal angle, use the tilt adjuster.

To stow the foot adjuster, hold up the projector while pressing the foot adjuster release button, then slowly lower the projector.



6 Adjusting the screen size and focus.


- 1 Use the zooming ring to adjust the screen size.
- 2 Use the focusing ring to adjust the focus.



7 Adjusting the volume with VOLUME +/- buttons.

The speaker volume can be adjusted when an audio signal is being input.

Notes

- Lamp characteristics may rarely cause the brightness to fluctuate slightly.
- A lamp is consumable item. If used for extended periods, images will appear dark, and the lamp could burn out. This is characteristic of a lamp, and is not malfunction. (The lifetime of the lamp depends on conditions of use.)
- The DLP® chip is made using extremely advanced technology. There may be black spots (pixels that do not light) or bright spots (pixels that are constantly lit) on the panel. These are intrinsic characteristics of the technology and are not malfunctions.
- Although this projector supports a wide range of RGB signals [p.42](#), any resolutions not supported by this projector (SVGA, XGA) will be expanded or shrunk, which will affect image quality slightly. To view high-quality images, set the computer's external output to SVGA / XGA.
- With some models of computer having LCD displays or the like, displaying images simultaneously on the projector and the monitor's display may prevent the images from displaying properly. If this happens, turn off the computer's LCD display. For information on how to turn off the LCD display, see the computer's user's manual.
- If no signal is being input from the connected equipment or signal input is stopped while projecting, the "No signal" message will appear.
- If a signal not supported by the projector is input, the "Unsupported signal" message will appear.
- If an unavailable operation button is pressed, the  icon will appear.

Using the handy features

■ Using auto setting (For computer input only)

This function automatically sets up the projector to the optimum state. It sets up sampling phase, frequency and screen position for each type of the input signal by using simple operations.

● Press the remote control's **AUTO ADJ.** button.

Remote Control

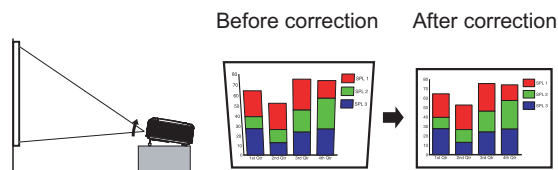
■ Notes

- The image may not be projected or auto adjustment/setting may not be performed correctly for input signals other than those supported by the projector. [p.42](#)
- If auto setting fails adjustment, adjust manually with **Image adjustment** menu. [p.30](#)



■ Correcting the keystone distortion

When the projector placement angle against the screen is changed while projecting the image, the picture will undergo keystone (trapezoidal) distortion. This projector is capable of correcting this keystone distortion.



● Press the remote control's **KEYSTONE +/-** button.

You can also select [V Keystone] in the **Screen setting** menu. [p.32](#)

Remote Control

■ Notes

- Depending on the amount of keystone adjustment and the content of images, some information may be lost, or the picture quality may suffer.



Using the handy features (Continued)

■ Cutting off the picture and sound temporarily (Mute)

When you want to project the images of another projector, overhead projector, etc. temporarily, this projector's images and sound can be turned off.

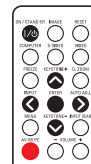
● Press the remote control's AV-MUTE button.

The picture and sound are cut off. (The Mute function is released when pressing the **AV-MUTE** button again.)

■ Notes

- Operating any other functions will also cancel the muting.

Remote Control



■ Freezing the image (Freeze)

The projected image can be frozen. This function is used to pause a video during a presentation, etc.

● Press the remote control's FREEZE button.

The picture pauses. (The Freeze function is released by pressing the **FREEZE** button again.)

■ Notes

- Other operations will also release the freeze.
- Although an image is frozen on the projector, the pictures are running on the video or other equipment.
- If you use this function on commercial video software, broadcast or cable-broadcasting except for the purpose of your private viewing and listening, it may infringe the copyright protected by the copyright laws.

Remote Control



Operations

■ Changing picture mode

The projected image mode can be selected.

● Press the remote control's IMAGE button.

1 The picture mode menu appears.

- | | |
|-----------------|---------------|
| 1: Presentation | 5: Blackboard |
| 2: Bright | 6: Classroom |
| 3: Movie | 7: User1 |
| 4: sRGB | 8: User2 |

2 Select a mode using ▲ ▼ then press ○.

Though the button is not pressed, the picture mode changes as the setting is changed and the display turns off automatically in a few seconds.

■ Notes

- [Image mode] of the **Image adjustment** menu has the same function.

Remote Control




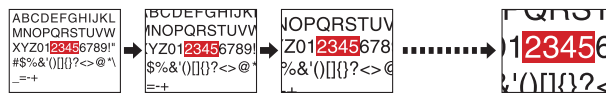
Using the handy features (Continued)

■ Resizing image

The projected image can be resized (zoomed in/out).

1 Press the remote control's D. ZOOM and  buttons.


Each time you press the  button, zoom ratio is up. You can keep pressing.



Remote Control



2 Press the remote control's D. ZOOM and  buttons.

Each time you press the  button, zoom ratio is down. You can keep pressing. (However, the image cannot be smaller than the original size.)



3 To move the area to zoom in/out, use the     buttons.

You can keep pressing.



4 When the image returns to the original size by pressing D. ZOOM button several times, the zoom will be reset.

■ Notes

- Operating a function other than AV-Mute will release resizing.
- As zooming is processed digitally, the image quality is degraded in larger zoom ratio.
- During resizing or moving the zooming area, the image may be distorted.

Using the menus

You can call up on-screen menus, and conduct a number of adjustments and settings using the operation buttons on the remote control. [p.15](#)

■ How to use the menus

The menu shown below is for operation instructions purposes and might differ from the actual display.

1. Press the MENU button

Display the **Image adjustment** menu

2. Select a Category

Select a category by using . There are following 4 categories:

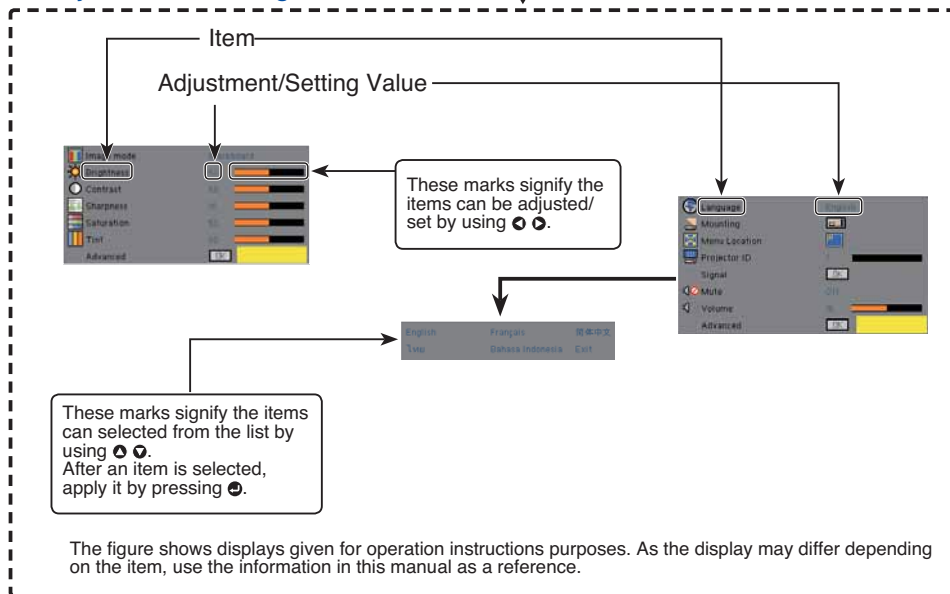
- Image adjustment** menu [p.30](#)
- Screen setting** menu [p.32](#)
- Default setting** menu [p.33](#)
- Options setting** menu [p.34](#)



Displays the current adjustments and settings of selected category. Item shown with gray cannot be adjusted with the current input source.

Press the or button.

3. Adjustment & Settings



Operations

4. Back

Press the Menu Button



























5. End

Press the Menu Button again. The menu disappears.

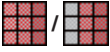

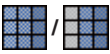




Using the menus (Continued)

■ The image adjustment menu

Use this menu to set or adjust image-related items. Items that can be set or adjusted are marked “**Yes**”, and those that cannot are marked “**No**”. (When an item is masked, it indicates that you cannot select for the current input.)

Item 	Description	RGB	Y/Pb/Pb	Video	S-video	HDMI
 Image Mode	Toggle the picture mode with  /  Presentation/Bright/ Movie/sRGB/Blackboard/ Classroom/User 1/User 2	Yes	Yes	Yes	Yes	Yes
 Brightness	Adjust the brightness of the image. Darker   Brighter	Yes	Yes	Yes	Yes	Yes
 Contrast	Adjust the image contrast. Lower   Higher	Yes	Yes	Yes	Yes	Yes
 Sharpness	Adjust the sharpness of the image. Softer   Sharper	No	Yes	Yes	Yes	Yes
 Saturation	Adjust the saturation of the image. Unsaturated   Saturated	No	Yes	Yes	Yes	Yes
 Tint	Adjust the tint of the image color. Reddish   Greenish	No	No	Yes	Yes	Yes
Advanced						
 Gamma	Toggle the gamma type with  /  Film/Video/Graphics/PC	Yes	Yes	Yes	Yes	Yes
 BrilliantColor™	This adjustable item utilizes a new color-processing algorithm and system level enhancements to enable higher brightness while providing true, more vibrant colors in picture. The range is from “0” to “10”. If you prefer a stronger enhanced image, adjust toward the maximum setting. For a smoother, more natural image, adjust toward the minimum setting.					
 Color Temp.	Toggle the color temperature with  /  . Low/Medium/High (At higher temperature, the screen looks colder; at lower temperature, the screen looks warmer.)					

Using the menus (Continued)

















Item ▲ ▼	Description	RGB	Y/Pb/Pb	Video	S-video	HDMI
Color	Adjust the color of the image.	No	Yes	Yes	Yes	Yes
	Red/Red Gain Lighter ◀ ▶ Deeper	No	Yes	Yes	Yes	Yes
	Green/Green Gain Lighter ◀ ▶ Deeper	No	Yes	Yes	Yes	Yes
	Blue/Blue Gain Lighter ◀ ▶ Deeper	No	Yes	Yes	Yes	Yes
	Cyan Lighter ◀ ▶ Deeper	No	Yes	Yes	Yes	Yes
	Magenta Lighter ◀ ▶ Deeper	No	Yes	Yes	Yes	Yes
	Yellow Lighter ◀ ▶ Deeper	No	Yes	Yes	Yes	Yes
	Color Space Select an appropriate color matrix type with ◀ / ▶ AUTO/RGB/YUV	Yes	Yes	Yes	Yes	Yes
Input	Use this option to enable/disable input sources.	Yes	Yes	Yes	Yes	Yes

Using the menus (Continued)

■ The screen setting menu

Use this menu to set screen display-related items.











































(The items in gray color cannot be set with the current input selection.)

Item  	Description
 Aspect Ratio	Screen size setting. 4:3: This format is for 4x3 input sources. AUTO: Automatically selects the appropriate display format. 16:9: This format is for 16x9 input sources, like HDTV and DVD enhanced for widescreen TV. 16:10: This format is for 16x10 input sources, like widescreen laptop. Native: This format displays the original image without any scaling.
 Overscan	Overscan function removes the noise in a video image. Overscan the image to remove video encoding noise on the edge of video source.
 D. Zoom	Adjust the size of projected image. Minify   Magnify
 H Image Shift	Shift the projected image position horizontally. Move left   Move right
 V Image Shift	Shift the projected image position vertically. Move down   Move up
 V Keystone	Correct the keystone (trapezoid) distortion of the screen. Screen shrinking at bottom   Screen shrinking at top

Using the menus (Continued)

■ The default setting menu

This menu shows placement status and other settings. Items that can be set or adjusted are marked “**Yes**”, and those that cannot are marked “**No**”. (When an item is masked, it indicates that you cannot select for the current input.)





































Item ▲ ▼	Description							
 Language	Select one of the languages below to use for displaying the menu and messages. [] : Enter setting mode [   ] : Selection [Apply: ] English/Français/简体中文/ไทย/Bahasa Indonesia							
 Mounting	Set projection mode in accordance with Placement Style . p.19  (Standard)  (Rear)  (Ceiling)  (Rear ceiling)							
 Menu Location	Set the menu location on the display screen.  (Left top)  (Right top)  (Middle)  (Left bottom)  (Right bottom)							
 Projector ID	ID definition can be set up by menu (range 1~99), and allow user control an individual projector by RS232.							
Signal				RGB	Y/Pb/Pb	Video	S-video	HDMI
 Fine Sync	Adjust with   to eliminate flicker.			Yes	No	No	No	No
 Total Dots	Adjust the number of total dots in one horizontal period with  			Yes	No	No	No	No
 H. Position	Adjust the horizontal position of the image. Move left   Move right			Yes	No	No	No	No
 V. Position	Adjust the vertical position of the image. Move down   Move up			Yes	No	No	No	No
 Mute	Cut off the picture and sound temporarily. On   Off							
 Volume	Adjust sound volume. Quieter   Louder							
Advanced								
 Logo	Set whether the start-up screen displays when power is turned on. On   Off							
Closed Captioning	Select the closed captioning with  /  Off/CC1/CC2							

Using the menus (Continued)

■ The options setting menu

Use this menu to set lamp-related and other settings.

(The items in gray color cannot be set with the current input selection.)

Item  	Description
 Input Search	Set whether the input source with signals is only selected or not. On   Off
 High Altitude	Set whether to spin the the cooling fan speed or not. On   Off
 Information Hide	Set whether to display the searching message or not. On   Off
 Background Color	Screen to display when there is no input signal. Black   Red   Blue   Green   White
Advanced	
 Power Mode	Set the power mode. Standby   Active
 Direct Power On	Set whether to turn on the power when the ON/STANDBY button is pressed (On), or when the power cord is plugged in (Off). On   Off
 Auto Power Off (min)	Set the countdown timer interval. The countdown timer will start when there is no signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).
 Sleep Timer (min)	Set the countdown timer interval. The countdown timer will start with or without a signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).
Lamp Settings	
 Lamp Counter (Normal)	Display the projection time of normal mode.
 Lamp Counter (ECO)	Display the projection time of ECO mode.
 Lamp Life Reminder	Set whether to display the lamp end of life warning message or not. On   Off
 ECO Mode	Set whether to dim the projector lamp or not. On   Off
Lamp Counter Reset	Press [Yes]. Reset the lamp hour counter after replacing the lamp.
Reset	Press [Yes]. Reset all adjustments and settings to their factory settings.

About lamp

The product's light source is a mercury lamp that lights at increased internal pressure. Be sure to fully understand the following characteristics of the lamp and handle it with extreme care.

- The lamp may burst with a loud noise due to impact or deterioration, or fail to light at the expiration of its life.
- How long it takes before the lamp bursts or the life expires may vary greatly by lamp. Some may burst shortly after first use.
- Burst is likely to happen if the lamp is used after the replacement period has elapsed.
- When the lamp bursts, the broken pieces of glass may get inside the product or be released outside from the openings for ventilation.
- When the lamp bursts, a slight amount of mercury gas enclosed in the lamp along with glass dust may be released from the openings for ventilation.

■ Immediately replace the lamp when a replacement message appears on the screen.

- When the replacement time approaches, a message will appear on the screen.
- The risk of burst will increase if the lamp is continuously used without being replaced.
- Frequently check the used hours. (Refer to the **Options setting** menu.) [p.34](#)

■ When the lamp is broken

- If glass components, including a lamp and a lens, should break, handle the broken pieces with care to avoid injury and contact your dealer for repair service.
- In the event of lamp burst, unplug the product from the wall outlet, leave and completely ventilate the room. Then, thoroughly clean the area around the projector and discard any edible items placed in that area, as they may be contaminated.
- When the lamp bursts, consult a doctor if glass dust or mercury gas gets into your eyes or is inhaled.

Lamp replacement

A lamp is consumable supply. If used for extended periods, images will appear dark, and the lamp could burn out. This is characteristic of a lamp, and is not malfunction. (The life-time of the lamp depends on condition of use.) If this happens, replace it with a new one.

WARNING

- If the projector is mounted on the ceiling, it is recommended to use your Toshiba dealership when the lamp has to be exchanged.
Uncovering the lamp while the projector is mounted on a ceiling may lead to a danger of damage from falling pieces of glass if the lamp is broken. Besides, working at high elevations can also be hazardous. Do not attempt to replace the lamp by yourself.
- When replacing, always use lamp "PA3976U-1ET2" (sold separately). If the lamp other than the specified one is used, it may cause a malfunction or damage to the unit due to the difference in the connector shape or the lamp rate.

CAUTION

- If you have been using the projector, the lamp will be very hot, and may cause burn injuries.
Wait for the lamp to cool (for longer than 1 hour) before replacing it.
- If the lamp should break, please handle with care to avoid injury due to broken pieces and contact your dealer for repair service.

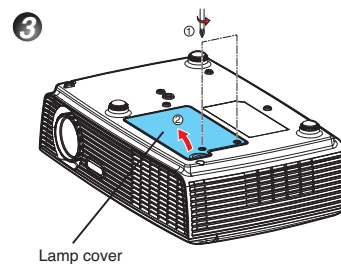
1 Unplug power cord.

2 Wait until lamp is sufficiently cooled.

Wait for at least 1 hour.

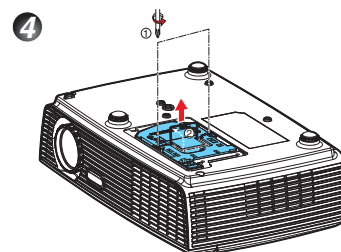
3 Remove the lamp cover.

Loosen the two screws, raise the lamp cover with your fingers to remove the lamp cover. Use care to avoid any damage to nails and/or tip of your finger(s). If you have any difficulty in removal, you can use a screwdriver or any other smaller tool for your convenience.



4 Pull up the lamp.

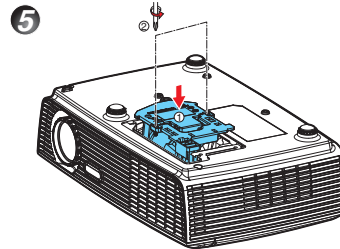
Loosen the two screws holding the lamp in place, and pull up the handle to remove the lamp.



Lamp replacement (Continued)

5 Mount the new lamp.

Align the orientation, press down the new lamp until the bottom is reached, and lock in place using the two lamp locking screws.




6 Replace the lamp cover.

Align the orientation, press down the new lamp until the bottom is reached, and lock in place using the two lamp locking screws.

7 Reset the lamp time.

See the lamp's manual for instructions on resetting the lamp time.

Notes and Precautions

- The [Lamp counter (Normal) / Lamp counter (ECO)] item in the **Options setting** menu indicates the time of lamp use (as a rough guide). [p.34](#)
- It is recommended that the lamp be replaced after 3,000 hours of normal use / 4,000 hours of eco mode. When [Lamp counter (Normal) / Lamp counter (ECO)] reaches 3,000 hours (Normal) / 4,000 hours (ECO), a message will appear. (After 3,000 hours (Normal) / 4,000 hours (ECO), the message will appear when the power is first turned on after each 100 hour period of use.) This display disappears when you press the  button.
- Attach the lamp cover correctly so that it is not loose. If it is not attached correctly, the projector may fail to be powered on or the lamp may fail to come on.
- Always replace the lamp with a new one.
- The lamp is made out of glass. Do not touch the glass surface with your bare hands, bang it, or scratch it. (Dirt, jolts, scratches and the like could break the lamp.)

Used Lamps

This projector's lamps contain trace amounts of environmentally harmful inorganic mercury. Be careful not to break used lamps, and dispose of them in accordance with local regulations.

Lens and main unit cleaning

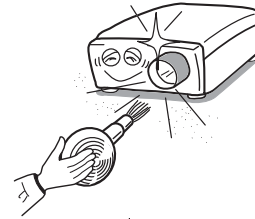


WARNING

- Request cleaning and maintenance of a ceiling-mounted unit from your projector dealership.
- Attempting to clean or replace the lamp in a high location by yourself may cause you to fall, resulting in injury.

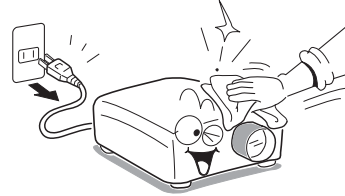
■ Lens cleaning

- Clean the lens with a commercially available blower and/or lens cleaner.
- The lens is easily scratched, so do not rub it with hard objects, or strike it.



■ Main unit cleaning

- Unplug the power cord before cleaning the main unit.
- Wipe dirt off the main unit gently with a soft cloth.
- Do not wipe the main unit with a damp cloth. Doing so may allow water to get inside, resulting in an electric shock or unit failure.
- Do not use benzene, thinner and the like as they may deform or discolor the unit or damage the paint surface.
- Do not use a chemically saturated cloth.



Trouble indicators

The indicator lights to inform you of internal abnormalities.

Power LED		Message
(Blue)	(Red)	
Off	On	In standby state ⇒ When connecting the power cord, the projector will be in standby state.
On	Off	In normal state ⇒ When turning the power on (press ON/STANDBY button), the projector will be in normal state.
Blink (1 sec)	Off	Powering up ⇒ The projector is warming up and will show the start-up logo
Blink (0.5 sec)	Off	Power off ⇒ Cooling-I: It cannot accept any key at this status.
Blink (1 sec)	Off	Power off ⇒ Cooling-II: It can accept ON/STANDBY button to power on the projector.
Off	Blink (0.5 sec)	Power went out during use ⇒ Problem with lamp. <ul style="list-style-type: none"> • Unplug the power cord, and contact your dealer.
Off	Blink (1 sec)	Power went out during use ⇒ Problem with internal cooling fan. <ul style="list-style-type: none"> • Unplug the power cord, and contact your dealer. • After approx. 5 second of abnormal display, the projector returns to the standby state waiting for internal cool down.
Off	Blink (0.5 sec on, 2 sec off)	Power went out during use ⇒ Internal overheating, or the outside temperature is too high. <ul style="list-style-type: none"> • Place the projector so that the air intake and exhaust are not blocked. • Unplug the power cord and wait for a short while, then turn the power back on. • After approx. 5 second of abnormal display, the projector returns to the standby state waiting for internal cool down.

Before calling service personnel

If you think something is wrong, check the followings before contacting customer service. Please see “**Trouble indications**” as well. [p.39](#)

If This Happens	Check
No power	<ul style="list-style-type: none"> • Is the power cord plugged in? Is it connected to the projector? • Is the lamp cover attached properly?
Power goes out during use	<ul style="list-style-type: none"> • Is the ambient temperature high? p.39 • Is the air intake or air exhaust blocked? p.39
No picture	<ul style="list-style-type: none"> • Is the input source selected correctly? (When [Input search] is [Off]). p.24 • Is the mute function on? p.27 • Is the brightness setting minimized? p.30 • Are the connections set up correctly? p.21 • Are all the connected devices functioning properly?
No audio	<ul style="list-style-type: none"> • Is the mute function on? p.27 • Is the volume setting minimized? p.25 • Are the connections set up correctly? p.21 • Are all the connected devices functioning properly?
Picture not displayed correctly	<ul style="list-style-type: none"> • Is the input signal supported by the projector? p.42 • Is there something generating an abnormal video signal, for instance the video tape?
Picture blurred Part of picture out of focus	<ul style="list-style-type: none"> • Is the lens dirty? p.38 • Is the lens focus adjusted optimally? p.25 • Is the projection distance within the projector’s supported range? p.20 • Is the projector’s screen placement angle tilted too far? p.20 • Are the sharpness or sampling phase adjustments off?
Image is dark	<ul style="list-style-type: none"> • Are the brightness or contrast adjustments off? • Is the lamp nearing the end of its service life?
Colors too light Bad shading	<ul style="list-style-type: none"> • Are the color, tint adjustments off? p.30 • Is the screen dirty? • Is the lamp nearing the end of its service life? p.34
Remote control doesn’t work	<ul style="list-style-type: none"> • Is the remote control’s battery drained? • Is the battery inserted into the remote control correctly? p.18 • Is the remote control being used within the effective range? p.18 • Are there any obstructions between the remote control and projector? • Are there any fluorescent or other bright lights shining at the projector’s infrared remote sensor?

Specifications

■ List of general specifications

	Item	Specification
	Consumption Power	Normal mode: 255W Standby mode: <0.5 Watt
	Weight	2.3 kg
	External Dimensions (including protruding parts)	286 x 192 x 100 mm (W x D x H)
	Cabinet material	PC resin
	Conditions for usage environment	Temp: 5°C ~ 35°C; relative humidity: 20% ~ 80%
	Display pixels	1 DLP® chip
	Picture elements	480,000 pixels (SVGA, 800H x 600V) NPS10A model 786,432 pixels (XGA, 1024H x 768V) NPX10A model
	Projection system	Single Chip DLP® Technology
	Lens	Zoom lens F=2.41-2.55 f=21.8-24 mm
	Lamp	High-pressure mercury lamp (180 W)
	Projection screen size	30 - 300 inches
	Projection distance	1.19 m - 11.89 m
	Speaker	2W
Connection terminal	SERIAL terminal	Mini DIN 3 pin (Maintenance use only)
	COMPUTER IN terminal	Mini D sub 15 pin Analog RGB / Y/Pb/Pr (dual use)
	VIDEO terminal	S-VIDEO: Mini DIN 4 pin
		VIDEO: RCA Pin Jack
		AUDIO: 3.5mm dia. stereo mini-jack
		HDMI: 19-pin HDMI (V1.3)
	MONITOR OUT terminal	Mini D sub 15 pin RGB / Y/Pb/Pr (dual use)
AUDIO OUT terminal	3.5mm dia. stereo mini-jack	

■ Notes

- This model complies with the above specifications.
- Designs and specifications are subject to change without notice.
- This model may not be compatible with features and/or specifications that may be added in the future.

Specifications (Continued)

■ List of supported signals (RGB signals)

This projector supports the following RGB signals. Note, however, that depending on the computer model, the screen may show flicker or streaking. Please adjust the projector if this happens.

Mode	Resolution	V-Sync [Hz]	H-Sync [KHz]
VGA	640x350	85	37.9
VGA	640x400	85	37.9
VGA	640x480	60	31.5
VGA	640x480	72	37.9
VGA	640x480	75	37.5
VGA	640x480	85	43.3
VGA	720x400	70	31.5
VGA	720x400	85	37.9
SVGA	800x600	56	35.2
SVGA	800x600	60	37.9
SVGA	800x600	72	48.1
SVGA	800x600	75	46.9
SVGA	800x600	85	53.7
XGA	1024x768	60	48.4
XGA	1024x768	70	56.5
XGA	1024x768	75	60
XGA	1024x768	85	68.7
WXGA	1280x768	60	47.4
WXGA	1280x768	75	60.3
WXGA	1280x720	60	45
WXGA	1280x800	60	49.3
SXGA	1152x864	60	53.8
SXGA	1152x864	70	63.8
SXGA	1152x864	75	67.5
SXGA	1152x864	85	77.1
SXGA	1280x1024	60	63.98
SXGA	1280x1024	75	79.98
SXGA	1280x1024	85	91.1
SXGA	1280 x 960	60	60.0
SXGA+	1400x1050	60	65.31
UXGA	1600x1200	60	75

■ Notes

- Signals of which resolution exceeds the native resolution (800 x 600 pixels / 1024 x 768 pixels) will be compressed. For this reason, some information may be lost, or image quality may be affected.

Specifications (Continued)

■ List of supported signals (HDMI)

Mode	Resolution	V-Sync [Hz]	H-Sync [KHz]
(1) HDMI - PC Signal			
VGA	640x480	60	31.47
VGA	640x480	72	37.86
VGA	640x480	75	37.5
VGA	640x480	85	43.27
SVGA	800x600	56	35.2
SVGA	800x600	60	37.88
SVGA	800x600	72	48.08
SVGA	800x600	75	46.88
SVGA	800x600	85	53.67
SVGA	800x600	119.85	77.2
XGA	1024x768	60	48.36
XGA	1024x768	70	56.48
XGA	1024x768	75	60.02
XGA	1024x768	119.804	98.8
SXGA	1152x864	75	67.5
SXGA	1152x864	85	77.1
SXGA	1280x1024	60	64
SXGA	1280x1024	75	79.98
SXGA	1280x1024	85	91.15
SXGA	1280x960	75	75
(2) HDMI - Extended Wide timing			
WXGA	1280x768	60	47.78
WXGA	1280x768	75	60.29
WXGA	1280x768	85	68.63
WXGA	1280x720	60	44.8
WXGA	1280x800	60	49.6
WXGA	1440x900	60	55.9
WXGA	1680x1050	60	65.3
WXGA	1366x768	60	47.71
WXGA	1920x1080-RB	60	66.6

Specifications (Continued)

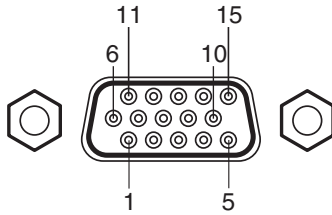
Mode	Resolution	V-Sync [Hz]	H-Sync [KHz]
(3) HDMI - Video Signal			
480i	720x480(1440x480)	59.94(29.97)	27
480p	720x480	59.94	31.47
576i	720x576(1440x576)	50(25)	27
576p	720x576	50	31.25
720p	1280x720	60	45
720p	1280x720	50	37.5
1080i	1920x1080	60(30)	33.75
1080i	1920x1080	50(25)	33.75
1080p	1920x1080	60	67.5
1080p	1920x1080	50	56.26
1080p	1920x1080	24	27
1080p	1920x1080	23.98	26.97

■ List of supported signals (Video)

NTSC	M (3.58MHz), 4.43 MHz
PAL	B, D, G, H, I, M, N
SECAM	B, D, G, K, K1, L
SDTV	480i/p, 576i/p
HDTV	720p(50/60Hz), 1080i/p(50/60Hz)

Specifications (Continued)

■ Pin assignment of COMPUTER IN terminal



Mini D sub 15 Pin connector

Input Signal

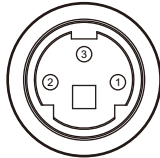
- RGB input
 - RGB signals: 0.7V (p-p) 75 Ω
 - Horizontal sync signal: TTL level (Pos/neg polarity)
 - Vertical sync signal: TTL level (Pos/neg polarity)
- Y/Pb/Pr input
 - Y signal: 1.0V (p-p) 75 Ω
 - Pb/Pr signals: 0.7V (p-p) 75 Ω

Pin No.	Pin description	
	During RGB input	During Y/Pb/Pr input
1	Video signal (R)	Color difference signal (Pr)
2	Video signal (G)	Luminance signal (Y)
3	Video signal (B)	Color difference signal (Pb)
4	N.C	*
5	GND	*
6	GND (R)	GND (Pr)
7	GND (G)	GND (Y)
8	GND (B)	GND (Pb)
9	+5V	*
10	GND	*
11	N.C	*
12	SDA	*
13	Horizontal sync signal	*
14	Vertical sync signal	*
15	SCL	*

* Do not connect anything.

■ SERIAL terminal

● Pin assignment



Mini DIN 3 pin connector

Pin No.	Signal Name	Description
1	TXD	Sending data
2	RXD	Receiving data
3	GND	Signal ground

■ Notes

- Contact your dealer for control cable and commands.

TOSHIBA CORPORATION